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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/019,565	06/05/2002	Nils Olof Hakansson	559224-66498 Hb/Gu	8698

466 7590 07/17/2003

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EXAMINER

HOPKINS, ROBERT A

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/019,565

Applicant(s)

HAKANSSON ET AL.

Examiner

Robert A Hopkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-8 is/are rejected.
- 7) ☒ Claim(s) 2-4 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Specification***

The disclosure is objected to because of the following informalities:

Examiner respectfully requests applicant provide proper headings for the specification, such as background of the invention, summary of the invention, brief description of the drawings, detailed description of the invention.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Guzdar et al(3662524) taken together with Hofer et al(5954035).

Guzdar et al discloses a device for separating small drops of liquid from a flowing gas, containing liquid mist, comprising a first container(2) formed of a cylindrical lateral wall and two opposite end walls, the first container having an inlet(5a) in one end wall for the gas/mist, a first outlet(6a) in the other end wall for the gas and a second outlet(26) at the second end wall for liquid separated out of the gas, a second container(3) with means(4) for rotatably mounting the first container in the second container rotationally symmetrically in relation to the inlet and first outlet, and drive

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means(9) for rotation of the first container in the second container, wherein the inlet and outlets communicate with each other via a plurality of layers of peripherally spaced narrow channels(21a) extending in the direction of the rotational axis and being disposed at a radial distance from the rotational axis, the narrow channels having a radial dimension being adapted to their length, the radial distance to the rotational axis, the flow velocity of the gas, and the rotational speed, so that at least the major portion of the liquid drops in the mist will have time to be deposited on the channel walls before they reach the outlet. Guzdar et al is silent as to wherein the inlet of the first container is joined to a ventilation conduit from a crankcase of an internal combustion engine and its outlet is joined to an inlet air conduit to the engine. Hofer et al discloses a centrifugal device for separating oil from an oil air mixture, wherein the inlet of the centrifugal device is joined to a ventilation conduit from a crankcase of an internal combustion engine and the outlet is joined to an inlet air conduit to the engine. It would have been obvious to someone of ordinary skill in the art at the time of the invention to connect the gas/liquid centrifugal separator of Guzdar et al to a ventilation conduit from a crankcase of an internal combustion engine and to an inlet air conduit of an engine so that oil from a crankcase gas can be centrifugally separated within the channels of the separator of Guzdar et al.

Guzdar et al further discloses wherein the drive means are formed by a liquid turbine. Guzdar et al further teaches wherein the extent of the channel layers radially amounts to circa 20% of the radius of the first container. Guzdar et al further discloses wherein the end walls are joined to rotatably mounted hollow shafts , the interiors of

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which forming inlet and outlet channels, respectively, and in that a turbine wheel is fixed to one of the shafts. Guzdar et al further discloses wherein the radius of the first container is circa 100mm and its length circa 200mm(see dimensions column 2 lines 20-22), that the container is designed to be driven at a rotational speed of circa 3000 rpm(column 3 line 12), that the radial dimension of the channels is less than 1mm(see dimensions column 2 line 28), and that the outermost channel layer is located at a maximum radial distance from the rotational axis.

***Allowable Subject Matter***

Claims 2-4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

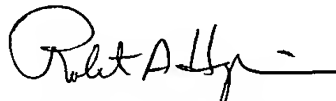
Claim 2 recites "said inlet opening leading to a plurality of radial inlet passages(35) leading out to inlets of the channels(34), and that the channels have outlets opening, firstly, into a plurality of radial outlet passages(36), through which the gas can flow into an outlet opening(24) placed concentrically with said rotational axis". Guzdar discloses an inlet and outlet, but does not disclose a plurality of radial inlet passages and a plurality of radial outlet passages. It would not have been obvious to someone of ordinary skill in the art at the time of the invention to provide a plurality of radial inlet passages and radial outlet passages because Guzdar et al does not suggest such a modification. Claims 3 and 4 depend on claim 2 and hence would also be allowable upon incorporation of claim 2 into claim 1.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert A Hopkins whose telephone number is 703-308-3913. The examiner can normally be reached on Monday-Friday 9:00am-4:00pm, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Blaine Copenheaver can be reached on 703-308-1261. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9572 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Robert A Hopkins  
Primary Examiner  
Art Unit 1724

rah  
July 14, 2003